

Amendment to the Claims

1.(Currently Amended) A light emitting apparatus comprising a light emitting element, and a phosphor which absorbs a part of light emitted from said light emitting element and converts it into light with a different wavelength, wherein:

the surface of said phosphor is coated with a coating member which is made of a material that is different from the phosphor; phosphor, wherein
said coating member is made of metal nitride or metal exynitride. oxynitride; and
a BET value of said coated phosphor is 1.0 to 10 times larger than a BET value of said phosphor before coating.

2. (Currently Amended) The light emitting apparatus according to claim 1, wherein said coating member coats the surface of said phosphor so as to have whereby having a substantially smooth film.

3.(Currently Amended) The light emitting apparatus according to claim 1, wherein said coating member is formed such that a large number of fine particles, which are relatively smaller than said phosphor, aggregate to coat the whole surface of said phosphor.

4. (Previously Presented) The light emitting apparatus according to claim 1, wherein said coating member contains at least one metallic element selected from the group consisting of Al, Si, and In, Ga and the other rare earth elements.

5. (Previously Presented) The light emitting apparatus according to claim 1, wherein the phosphor

before coating has hydration characteristics.

6. (Previously Presented) The light emitting apparatus according to claim 1, wherein said phosphor is an alkaline-earth silicon nitride phosphor.

7. (Previously Presented) The light emitting apparatus according to claim 1, wherein said phosphor is an alkaline-earth silicon oxynitride phosphor.

8. (Cancelled)

9. (Previously Presented) The light emitting apparatus according to claim 1, wherein the average thickness of said coating is 10 nm to 500 nm.

10. (Previously Presented) The light emitting apparatus according to claim 1, wherein said coating is formed in chemical vapor deposition.

11. (Currently Amended) A phosphor for a light emitting element which absorbs a part of light emitted from the light emitting element and converts it into light with different wavelength, wherein wavelength, wherein:

the surface of said phosphor is coated with a coating member which is made of a material different from the phosphor, wherein phosphor;

11. (Currently Amended) said coating member is made of metal nitride or metal exynitride- oxynitride; and
a BET value of said coated phosphor is 1.0 to 10 times larger than a BET value of said
phosphor before coating.

12. (Currently Amended) The phosphor for a light emitting element according to claim 11,
wherein said coating member coats the surface of said phosphor so as to have~~whereby having~~ a
substantially smooth film.

13. (Currently Amended) The phosphor for a light emitting element according to claim 11,
wherein said coating member is formed such that a large number of fine particles, which are relatively
smaller than the phosphor, aggregate to coat the whole surface of said phosphor.

14.(Previously Presented) The phosphor for a light emitting element according to claim 11,
wherein said coating member contains at least one metallic element selected from the group consisting
of Al, Si, and In, Ga and rare earth elements.

15.(Previously Presented) The phosphor for a light emitting element according to claim 11,
wherein the phosphor before coating has hydration characteristics.

16.(Previously Presented) The phosphor for a light emitting element according to claim 11,
wherein said phosphor is an alkaline-earth silicon nitride phosphor.

17. (Previously Presented) The phosphor for a light emitting element according to claim 11, wherein said phosphor is an alkaline-earth silicon oxynitride phosphor.

18. (Cancelled)

19. (Previously Presented) The phosphor for a light emitting element according to claim 11, wherein the average thickness of said coating is 10 nm to 500 nm.

20. (Previously Presented) The phosphor for a light emitting element according to claim 11, wherein said phosphor is charged to a negative surface potential before coating.

21. (Currently Amended) The phosphor for a light emitting element according to claim 11, wherein said coating is formed in a chemical vapor deposition process.

22. (Cancelled)

23. (Currently Amended) A method for producing a phosphor for a light emitting element which absorbs a part of light emitted from the light emitting element and converts it into light with different wavelength, the method ~~comprises steps of~~ comprising:

absorbing a reaction precursor onto the surface of the phosphor; and

coating the surface of the phosphor with a metal nitride by reacting said reaction precursor with a co-reaction material in chemical vapor deposition,
wherein a BET value of said coated phosphor is 1.0 to 10 times larger than a BET value of said phosphor before coating.

24. (Previously Presented) The method for producing a phosphor for a light emitting element according to claim 23, wherein said reaction precursor is an organic metal.

25. (Previously Presented) The method for producing a phosphor for a light emitting element according to claim 24, wherein said organic metal contains at least one metallic element selected from the group consisting of Al, Si, and In, Ga and rare earth elements.

26. (Currently Amended) The method for producing a phosphor for a light emitting element according to claim 23, wherein said co-reaction material is any of oxygen, water vapor and ammonia.

27. (Currently Amended) The method for producing a phosphor for a light emitting element according to claim 23, wherein the method further comprises a step of thermally treating the phosphor for a light emitting element after coating in a non-oxidation atmosphere.

28. (Previously Presented) The method for producing a phosphor for a light emitting element

according to claim 27, wherein the temperature range of said thermal treatment is 150°C to 1000°C, and the time is 3 to 10 hours.

29. (Currently Amended) A nitride group phosphor which converts at least a part of light with first emission spectrum into light with at least one second emission spectrum in the range different from said first emission spectrum, comprising:

 a nitride group phosphor material containing N (where N is nitrogen); and
 a coating material which is made of any of metal oxide, metal nitride and metal oxynitride and coats said nitride group phosphor material such that the BET value of the coated phosphor is 1.0 to 10 times larger than at the BET value before coating.

30. (Original) The nitride group phosphor according to claim 29, wherein said coating material is a metal nitride group material, or a metal oxynitride group material.

31. (Original) The nitride group phosphor according to claim 29, wherein said coating material forms a micro capsule.

32. (Previously Presented) The nitride group phosphor according to claim 29, wherein said coating material has a multi-layer structure formed of a plurality of different materials.

33. (Original) The nitride group phosphor according to claim 32, wherein said coating material of the

multi-layer structure has a high refractive index on said phosphor side, and a low refractive index on the surface side.

34. (Previously Presented) The nitride group phosphor according to claim 29, wherein said phosphor is a nitride group phosphor represented by $L\text{-}M\text{-}N\text{:}R$ or $L\text{-}M\text{-}O\text{-}N\text{:}R$ (where L contains at least one element selected from the group consisting of Be, Mg, Ca, Sr, Ba, and Zn, M contains at least one element selected from the group consisting of C, Si, Ge, Sn, Ti, Zr, and Hf, N is nitrogen, O is oxygen, and R is a rare earth element).

35. (Previously Presented) The nitride group phosphor according to claim 29, wherein said phosphor is represented by $L_xM_yN_{\{(2/3)x+(4/3)y\}}\text{:}R$, or $L_xM_yO_zN_{\{(2/3)x+(4/3)y-(2/3)z\}}\text{:}R$ (where L contains at least one element selected from the group consisting of Be, Mg, Ca, Sr, Ba, and Zn, M contains at least one element selected from the group consisting of C, Si, Ge, Sn, Ti, Zr, and Hf, N is nitrogen, O is oxygen, and R is a rare earth element), and has a crystal structure.

36. (Previously Presented) The nitride group phosphor according to claim 29, wherein said phosphor is represented by $L_xM_yN_{\{(2/3)x+(4/3)y\}}\text{:}R$, or $L_xM_yO_zN_{\{(2/3)x+(4/3)y-(2/3)z\}}\text{:}R$ (where $0.5 \leq x \leq 3$, $1.5 \leq y \leq 8$, $0 \leq z \leq 3$; L contains at least one element selected from the group consisting of Be, Mg, Ca, Sr, Ba, and Zn, M contains at least one element selected from the group consisting of C, Si, Ge, Sn, Ti, Zr, and Hf, N is nitrogen, O is oxygen, and R is a rare earth element), and has a crystal structure.

37. (Previously Presented) The nitride group phosphor according to claim 29, wherein said phosphor is represented by $L_xM_yN_{\{(2/3)x+(4/3)y\}}:R$, or $L_xM_yO_zN_{\{(2/3)x+(4/3)y-(2/3)z\}}:R$ (where $x = 2, 4.5 \leq y \leq 6.0, 0.01 < z < 1.5$; $x = 1, 6.5 \leq y \leq 7.5, 0.01 < z < 1.5$; or $x = 1, 1.5 \leq y \leq 2.5, 1.5 \leq z \leq 2.5$; L contains at least one element selected from the group consisting of Be, Mg, Ca, Sr, Ba, and Zn, M contains at least one element selected from the group consisting of C, Si, Ge, Sn, Ti, Zr, and Hf, N is nitrogen, O is oxygen, and R is a rare earth element), and has a crystal structure.

38. (Previously Presented) The nitride group phosphor according to claim 29, wherein said phosphor is represented by $Ca_2Si_5O_{0.1}N_{7.9}:Eu$, $Sr_2Si_5O_{0.1}N_{7.9}:Eu$, $(Sr_{0.5}Ca_{0.5})_2Sr_5O_{0.1}N_{7.9}:Eu$, $SrSi_2O_2N_2:Eu$, or $CaSi_2O_2N_2:Eu$, and has a crystal structure.

39. (Previously Presented) The nitride group phosphor according to claim 35, wherein the crystal structure of said phosphor is a monoclinic system or orthorhombic system.

40. (Previously Presented) The nitride group phosphor according to claim 29, wherein said phosphor contains a B element.

41. (Previously Presented) A light emitting apparatus comprising a phosphor member composed of a transparent material containing a nitride group phosphor according to claim 29, and a light emitting element, wherein said phosphor member absorbs a part of light emitted from said light emitting element and emits light with different wavelength.

42. (Currently Amended) A nitride group phosphor which converts at least a part of light with first emission spectrum into light with at least one second emission spectrum in the range different from said first emission spectrum, comprising:

 a nitride group phosphor material which includes an N element and
 is charged to a negative surface potential before coating of the phosphor; and
 a coating material which is made of any of metal oxide, metal nitride and metal oxynitride
 and coats said nitride group phosphor material.
 material,

wherein a BET value of said coated phosphor is 1.0 to 10 times larger than a BET value of said phosphor before coating.

43. (Previously Presented) The nitride group phosphor according to claim 42, wherein said coating material is a metal nitride group material, or a metal oxynitride group material.

44. (Previously Presented) The nitride group phosphor according to claim 42, wherein said coating material forms a micro capsule.

45. (Previously Presented) The nitride group phosphor according to claim 42, wherein said coating material has a multi-layer structure formed of a plurality of different materials.

46. (Previously Presented) The nitride group phosphor according to claim 45, wherein said coating

material of the multi-layer structure has a high refractive index on said phosphor side, and a low refractive index on the surface side.

47. (Previously Presented) The nitride group phosphor according to claim 42, wherein said phosphor is a nitride group phosphor represented by $L\text{-M-N:R}$ or $L\text{-M-O-N:R}$ (where L contains at least one element selected from the group consisting of Be, Mg, Ca, Sr, Ba, and Zn, M contains at least one element selected from the group consisting of C, Si, Ge, Sn, Ti, Zr, and Hf, N is nitrogen, O is oxygen, and R is a rare earth element).

48. (Previously Presented) The nitride group phosphor according to claim 42, wherein said phosphor is represented by $L_xM_yN_{\{(2/3)x+(4/3)y\}}:R$, or $L_xM_yO_zN_{\{(2/3)x+(4/3)y-(2/3)z\}}:R$ (where L contains at least one element selected from the group consisting of Be, Mg, Ca, Sr, Ba, and Zn, M contains at least one element selected from the group consisting of C, Si, Ge, Sn, Ti, Zr, and Hf, N is nitrogen, O is oxygen, and R is a rare earth element), and has a crystal structure.

49. (Previously Presented) The nitride group phosphor according to claim 42, wherein said phosphor is represented by $L_xM_yN_{\{(2/3)x+(4/3)y\}}:R$, or $L_xM_yO_zN_{\{(2/3)x+(4/3)y-(2/3)z\}}:R$ (where $0.5 \leq x \leq 3$, $1.5 \leq y \leq 8$, $0 \leq z \leq 3$; L contains at least one element selected from the group consisting of Be, Mg, Ca, Sr, Ba, and Zn, M contains at least one element selected from the group consisting of C, Si, Ge, Sn, Ti, Zr, and Hf, N is nitrogen, O is oxygen, and R is a rare earth element), and has a crystal structure.

50. (Previously Presented) The nitride group phosphor according to claim 42, wherein said phosphor is represented by $L_xM_yN_{\{(2/3)x+(4/3)y\}}:R$, or $L_xM_yO_zN_{\{(2/3)x+(4/3)y-(2/3)z\}}:R$ (where $x = 2$, $4.5 \leq y \leq 6.0$, $0.01 < z < 1.5$; $x = 1$, $6.5 \leq y \leq 7.5$, $0.01 < z < 1.5$; or $x = 1$, $1.5 \leq y \leq 2.5$, $1.5 \leq z \leq 2.5$; L contains at least one element selected from the group consisting of Be, Mg, Ca, Sr, Ba, and Zn, M contains at least one element selected from the group consisting of C, Si, Ge, Sn, Ti, Zr, and Hf, N is nitrogen, O is oxygen, and R is a rare earth element), and has a crystal structure.

51. (Previously Presented) The nitride group phosphor according to claim 42, wherein said phosphor is represented by $Ca_2Si_5O_{0.1}N_{7.9}:Eu$, $Sr_2Si_5O_{0.1}N_{7.9}:Eu$, $(Sr_{0.5}Ca_{0.5})_2Sr_5O_{0.1}N_{7.9}:Eu$, $SrSi_2O_2N_2:Eu$, or $CaSi_2O_2N_2:Eu$, and has a crystal structure.

52. (Previously Presented) The nitride group phosphor according to claim 48, wherein the crystal structure of said phosphor is a monoclinic system or orthorhombic system.

53. (Previously Presented) The nitride group phosphor according to claim 42, wherein said phosphor contains a B element.

54. (Previously Presented) A light emitting apparatus comprising a phosphor member composed of a transparent material containing a nitride group phosphor according to claim 42, and a light emitting element, wherein said phosphor member absorbs a part of light emitted from said light emitting element and emits light with different wavelength.